

2005

- Anders, M. M., Schmid, B., and **Olk, D. C.** Short and long term effects of conservation tillage on soil resistance and aggregate stability in rice production systems. 27th Annual Southern Conservation Tillage Systems Conference. June 27-29, 2005
- Burkart, M. R., James, D. E.,** Liebman, M., and Van Ouwerkerk, E. N. J. A Nitrogen budget model as an indicator of leachable Nitrogen under agricultural catchments. Agriculture and the Environment Conference March 3-9, 2005
- Chang, C.W., **Laird, D.A.,** Hurburgh, C.R. Influences of soil moisture on near-infrared reflectance spectroscopic measurement of soil properties. Soil Science 170 (4):244-255
- Chaplot, V., Saleh, A., **Jaynes, D.B.** Effect of the accuracy of spatial rainfall information on the modeling of water, sediment, and NO₃-N loads at the watershed level. Journal of Hydrology 312:223-234
- Chappell, M.A., **Laird, D.A.,** Thompson ML, Li H, Teppen BJ, Johnston CT, Boyd SA. Influence of smectite hydration and swelling on atrazine sorption behavior. Environmental Science and Technology 39 (9):3150-3156
- Chappell, M.A., **Laird, D.A.,** Thompson, M.L., Evangelou, V.P. Co-sorption of atrazine and a lauryl polyoxyethylene oxide nonionic surfactant on smectite. Journal of Agricultural and Food Chemistry. 2005; 53:10127-10133
- Hanna, H.M., Boyd, P.M., Baker, J.L., **Colvin, T.S.** Anhydrous ammonia application losses using single-disc and knife fertilizer injector. Applied Engineering in Agriculture 2005; Paper No. 051060
- Hartzler, R.G., **Singer, J.W.,** Buhler, D.D., **Kohler, K.A.** Effect of repeated glyphosate use on weed communities in a soybean-corn rotation. Crop Management. www.cropmanagement.org.
- Hatfield, J. L. and Pfeiffer, R. L.** Evaluation of technologies for ambient air monitoring at concentrated animal feeding operations. AWMA Conference . April 19-21, 2005
- Hatfield, J.L.** The farmer's decision: Balancing economic successful agriculture with environmental quality. In: Hatfield JL (ed.), Ankeny, IA: Soil and Water Conservation Society. 2005
- Hatfield, J. L.** Review of writing and presenting scientific papers. Crop Science 45: 809. 2005.
- Jaynes, D. B. and Karlen, D. L.** Sustaining soil resources while managing nutrients. Upper Mississippi River-Sub Basin Hypoxia Nutrient Committee Workshop. Sept. 26-28, 2005
- Jaynes, D.B., Kaspar, T.C., Colvin, T.S.** Identifying potential soybean management zones from multi-year yield data. Computers and Electronics in Agric. 2005; 46:309-327
- Johnson, J.M., Reicosky, D.C., Allmaras, R.R., **Sauer, T.J.,** Venterea, R.T. Greenhouse gas contributions and mitigation potential of agriculture in the Central USA. Soil & Tillage Res. 2005; 83:73-94

- Kaleita, A.L., Heitman, J.L., **Logsdon, S.D.** Field calibration of the theta probe for Des Moines lobe soils. *Applied Engineering in Agriculture* 2005; 21 (5):865-870
- Karlen, D.L., Dinnes, D.L., Jaynes, D.B.,** Hurburgh, C.R., **Cambardella, C.A., Colvin, T.S.,** Rippke, G.R. Corn response to late-spring nitrogen management in the Walnut Creek watershed. *Agronomy Journal* 2005; 97 (4):1054-1061
- Kanwar, R.S., Cruse, R.M., Ghaffarzadeh, M., Bakhsh, A., **Karlen, D.L.,** Bailey, T.B. Corn-soybean and alternative cropping systems effects on NO₃-N leaching losses in subsurface drainage water. *Applied Engineering in Agriculture* 2005; 21 (2):181-188
- Kluchinski, D., **Singer, J.W.** Evaluation of weed control strategies in organic soybean production. *Crop Management*. 2005. www.cropmanagement.org.
- Kolz, A., Ong, S.K., **Moorman, T.B.** Sorption of tylosin onto swine manure. *Chemosphere* 2005; 60:284-289.
- Kolz, A., **Moorman, T.B.,** Ong, S.K., Scoggin, K.D., **Douglass, E.A.** Degradation and metabolite production of tylosin in anaerobic and aerobic swine manure lagoons. *Water Environmental Research* 2005; 77 (1):49-56.
- Kovar, J.L.,** Claassen, N. Soil-root interactions and Phosphorus nutrition of plants. In: Sims JT, Sharpley AN (eds.), *Phosphorus: Agriculture and the Environment*. 2005. pp. 379-414.
- Logsdon, S.D.** and Corey, A. L. Limitations of the chemical potential. (literature review). *Soil Science Society of America Journal* 69(5), 976-982.
- Logsdon, S.D.** Soil dielectric spectra from vector network analyzer data. *Soil Science Society of America Journal* 2005; 69 (5):983-989.
- Meek, D.W., Prueger, J.H.,** Kustas, W.P., **Hatfield, J.L.** Determining meaningful differences for SMACEX eddy covariance measurements. *Journal of Hydrometeorology* 2005; 6:805-811.
- Meek, D. W. and Singer, J. W.** An example of developing covariates for problems in precision agriculture. 16th Conference on Applied Statistics in Agriculture. April 25-28, 2005 pp.270-278.
- Mitra, S., Aulakh, M.S., Wassman, R., **Olk, D.C.** Triggering of methane production in rice soils by root exudates: Effects of soil properties and crop management. *Soil Sci.Soc.Am.J.* 2005; 69:563-570.
- Nepple, J., **Tomer, M. D., and Karlen, D. L.** Assessing soil fertility in the South Fork watershed of the Iowa river. *Soil and Water Conservation Society Annual Conference*. 2005. 7-31-2005.
- Parkin, T.B., Kaspar, T.C.,** Senwo, Z., **Prueger, J.H., Hatfield, J.L.** Relationship of soil respiration to crop and landscape in the Walnut Creek Watershed. *Journal of Hydrometeorology* 2005; 6:812-824.

- Prueger, J.H., Hatfield, J.L.,** Kustas, W.P., Hipps, L.E., Macpherson, J.I., **Parkin, T.B.** Tower and aircraft eddy covariance measurements of water, energy and carbon fluxes during SMACEX. *Journal of Hydrometeorology* 2005; 6:954-960.
- Russell, A.E., **Laird, D.A., Parkin, T.B.,** Mallarino, A.P. Impact of Nitrogen fertilization and cropping system on Carbon sequestration in Mid-Western corn belt mollisols. *Soil Sci.Soc.Am.J.* 2005; 69:413-422.
- Sauer, T.J., Logsdon, S.D.,** Brahana JV, Murdoch JF. Variation in infiltration with landscape position: Implications for forest productivity and surface water quality. *Forest Ecology & Management* 2005; 220:118-127.
- Scarbrough, D.A., Coblenz, W.K., Humphry, J.B., Coffey, K.P., Daniel, T.C., **Sauer, T.J.,** Jennings, J.A., Turner, J.E., Kellogg, D.W. Evaluation of dry matter loss, nutritive value, and in situ dry matter disappearance for wilting orchardgrass and bermudagrass forages damaged by simulated rainfall. *Agronomy Journal* 2005; 97:604-614.
- Singer, J. W. and Kaspar, T. C.** Cover crop selection and management for agronomic farming systems. Integrated Crop Management Conference. 2005. Nov. 30 – Dec. 1, 2005. *Equus* 2005; 114-115.
- Singer, J. W.** and Pedersen, P. Legume living mulches for corn and soybean. Iowa State Extension Fact Sheet . August 2005. www.extension.iastate.edu/Publications/PM2006.pdf.
- Singer, J.W., Kohler, K.A.** Rye cover crop management affects grain yield in a soybean-corn rotation. *Crop Management* 2005; www.cropmanagement.org.
- Tomer, M.D., Meek, D.W.,** Kramer, L.A. Agricultural practices influence flow regimes of headwater streams in Western Iowa. *J.Env.Qual.* 2005; 34:1547-1558.
- Tomer, M.D.** Watershed Management. In: *Encyclopedia of Soils in the Environment*. Elsevier. 2005: pp. 306-315.
- Tomer, M. D., Cambardella, C. A., James, D. E., and Moorman, T. B.** Variation in surface-soil properties and water contents across two watersheds with contrasting tillage histories. ASA-CSSA-SSSA Annual Meeting. Nov. 6-10, 2005.
- Tomer, M. D., Burkart, M. R., Cambardella, C. A., Meek, D. W., James, D. E., and Kramer, L. A.** Conservation practices: short term decisions with long term effects. *Soil and Water Conservation Society Annual Conference*. July 31-Aug. 3, 2005.
- Tomer, M. D., Dosskey, M. G. K, Burkart, M. R., James, D. E.,** Helmers, M. J., and Eisenhauer, D. E. Placement of riparian forest buffers to improve water quality. 9th North American Agroforestry Conference. June 12-15, 2005.
- Wang, Z., Kelly, J.M., **Kovar, J.L.** Rhizosphere solution chemistry and the nutrient status of juvenile corn, cottonwood, and switchgrass plants. *Plant and Soil Journal* 2005; 270:213-221.
- Westgate, L.R., **Singer, J.W., Kohler, K.A.** Method and timing of rye control affects soybean development and resource utilization. *Agronomy Journal* 2005; 97:806-816.

Westgate, L.R., **Singer, J.W.** Soybean development is affected by method and timing of rye control in cover crop systems. *Journal of Natural Resources & Life Sciences Education* 2005; 34:17-21.

Zaimes, G. N., Schultz, R. C., Isenhardt, T., Mickelson, S. K., **Kovar, J. L.**, Russell, J. R., and Powers, W. J. Stream bank erosion under different riparian land-use practices in Northeast Iowa. 9th North American Agroforestry Conference. June 12-15, 2005.

Zhao, S., Arthur, E.L, **Moorman, T.B.**, Coats JR. Evaluation of microbial inoculation and vegetation to enhance the dissipation of atrazine and metolachlor in soil. *Environmental Toxicology and Chemistry* 2005; 24 (10):2428-2434.